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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/865,484	05/29/2001	Johannes Steffens	4100-0126P	3500
2292	7590	07/28/2004	EXAMINER	
BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			WARE, CICELY Q	
			ART UNIT	PAPER NUMBER
			2634	5

DATE MAILED: 07/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/865,484

Applicant(s)

STEFFENS ET AL.

Examiner

Cicely Ware

Art Unit

2634

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 29 May 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 8 and 9 is/are rejected.
- 7) ☒ Claim(s) 4-7, 10-12 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 May 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 1.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to because:
  - a. In Fig. 1 and Fig. 2, element 8, examiner suggests applicant re-name this element in English.

### ***Specification***

2. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

### ***Claim Objections***

3. Claims 1-12 are objected to because of the following informalities:
  - a. Examiner suggests applicant delete all figure references from the claims.Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nikula et al. (US Patent 6,690,751) in view of Kiyanagi (US Patent 6,731,704).

With regard to claim 1, Nikula et al. discloses a process for synchronizing an input signal including the following process steps: demodulating the input signal according to a first demodulation method in relation to a first signal parameter for creating a first demodulated input signal; and correlating the first demodulated input signal with a first comparison signal that depends upon the first demodulation method (col. 1, lines 21-30, col. 2, lines 7-10, 24-28, col. 6, lines 34-38, col. 7, lines 19-21, 46-48).

However Nikula et al. does not disclose correlating the first demodulated input signal with a first comparison to determine a time offset between the first demodulated input signal and the first comparison signal; and time-wise shifting the input signal in accordance with the time-wise offset determined by the correlation.

However Kiyanagi discloses correlating the first demodulated input signal with a first comparison to determine a time offset between the first demodulated input signal and the first comparison signal; and time-wise shifting the input signal in accordance with the time-wise offset determined by the correlation (col. 2, lines 7-43).

Therefore it would have been obvious to one of ordinary skill in the art to modify the Nikula et al. to incorporate correlating the first demodulated input signal with a first comparison to determine a time offset between the first demodulated input signal and the first comparison signal; and time-wise shifting the input signal in accordance with the time-wise offset determined by the correlation in order to eliminate cross polarization

interference in which an amount of delay is changed without cell breathing irrespective to an operator and which operates stably without an adjustment and which is constituted to be high in density (Kiyonagi, col 3, lines 13-17).

6. Claims 2, 3, 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nikula et al. (US Patent 6,690,751) as applied to claim 1, in view of Kiyonagi (US Patent 6,731,704).

(1) With regard to claim 2, claim 2 inherits all the limitations of claim 1. Nikula discloses demodulating the input signal according to a second demodulation method in relation to a second signal parameter for creating a second demodulated input signal; and correlating the second demodulated input signal with a second comparison signal that depends upon the second demodulation method (col. 1, lines 21-30, col. 2, lines 7-10, 24-28, col. 6, lines 34-38, col. 7, lines 19-21, 31-32, 46-48).

However Nikula does not disclose correlating the second demodulated input signal with a second comparison signal for determining a time offset between the second demodulated input signal and the second comparison signal.

However Kiyonagi discloses correlating the second demodulated input signal with a second comparison signal for determining a time offset between the second demodulated input signal and the second comparison signal (col. 2, lines 7-43).

Therefore it would have been obvious to one of ordinary skill in the art to modify Nikula to incorporate correlating the second demodulated input signal with a second comparison signal for determining a time offset between the second demodulated input

signal and the second comparison signal in order to eliminate cross polarization interference in which an amount of delay is changed without cell breathing irrespective to an operator and which operates stably without an adjustment and which is constituted to be high in density (Kiyonagi, col 3, lines 13-17).

(2) With regard to claim 3, claim 3 inherits all the limitations of claim 2. Nikula et al. further discloses wherein the first demodulation method is amplitude demodulation and the first signal parameter is the amplitude and the second demodulation method is frequency demodulation in the second signal parameter is frequency (col.1, lines 33-37).

(3) With regard to claim 8, claim 8 inherits all the limitations of claim 1. Nikula et al. further discloses wherein the comparison signal is obtained by subjecting a synchronization sequence to the first demodulation method (col. 7, lines 19-30).

(4) With regard to claim 9, claim 9 inherits all the limitations of claim 1. Kiyonagi further discloses in (Fig. 1) wherein the input signal is subjected to an analog/digital conversion (11a, 12a, 14a, 15a) at one of before and after demodulation (11b, 12b, 14b, 15b).

#### ***Allowable Subject Matter***

7. Claims 4-7, 10-12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cicely Ware whose telephone number is 703-305-8326. The examiner can normally be reached on Monday – Friday, 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on 703-305-4714. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

***Cicely Ware***

cqw  
July 12, 2004

  
**STEPHEN CHIN  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600**